

**REMARKS**

Claims 1-4, 7-10 and 15-23 are pending in the application. Claims 5, 6 and 11-14 have been canceled. Claims 1-4, 7, 8, 15 and 18-21 have been amended and new claims 22 and 23 have been added. Favorable reconsideration of the application, as amended, is respectfully requested.

***I. REJECTION OF CLAIMS 1, 4, 5 AND 7 UNDER 35 U.S.C. § 103(a)***

Claims 1, 4, 5 and 7 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Durrance et al. (U.S. Publication No. 2002/0002358) as evidenced by Morman (U.S. Patent No. 5,226,992) and further in view of Schneider et al. (U.S. Publication No. 2004/0238105), Nakakado et al. (U.S. Patent No. 6,748,996), Nease et al. (U.S. Patent No. 5,705,013) and Guevara et al. (U.S. Patent No. 6,086,571). The Examiner acknowledges that Durrance et al. fails to disclose the elastic in the side panel material made of elastic threads, but contends that it would have been obvious to modify the method of Durrance to include elastic threads in the laminate based on the teaching of Schneider et al. The Examiner also acknowledges that Durrance et al. fails to disclose the side panel material made of a material that has intermittent elastic sections, but contends that it would have been obvious to incorporate the web forming method of Nakakado et al. into the method of Durrance et al. The Examiner further acknowledges that the combined teachings of Durrance et al., Morman, Schneider et al. and Nakakado et al. fail to teach that the non-contractile portion of the side panel is attached to the body member to bond the side panel to the body portion. It is the Examiner's position that it would have been obvious to bond the side panel to the body portion through the non-contractile portion of the panel as seen in Nease et al. and Guevara et al.

Applicants respectfully traverse the rejection for at least the following reasons. Claim 1 has been amended to clarify the following features of the method of the present invention: (i) a first and second non-contractile portions are alternately formed in the laminate at a predetermined interval; (ii) a fastening element is attached to the second non-contractile portion; (iii) the fastening element, together with the laminate, is cut into

two pieces; and (iv) the laminate is *cut along the first and second non-contractile portions* to form a pair of cut panels including two of the cut panels adjacent to each other in the flow direction. Claim 1 has been further amended to clarify the sequence of the steps of the claimed method. Support for this amendment may be found in the specification at least in paragraphs [0030], [0032], [0036] and [0037], in Fig.2, and in original claim 5. Claim 4, which depends from claim 1, has been amended to recite the feature that the laminate is cut off obliquely. Support for the amendment can be found in the specification at least in paragraphs [0056] and [0057], and in Fig. 6.

In the method of producing a worn article recited in the amended claim 1, as shown in the following illustration Fig. 1(a), the first and second non-contractile portions C1 and C2 are alternately formed in the laminate W at a predetermined interval and the fastening element F1 is attached to the second non-contractile portion C2. The laminate W is cut along the cut-off line CL extending in the width direction *in the first and second non-contractile portions C1 and C2*. The fastening element F1, together with the laminate W, is cut in the second non-contractile portion C2. The laminate W is cut in the first non-contractile portion C1 to form a pair of cut panels including the two cut panels PR and PL adjacent to each other in the flow direction. After that, as shown in the illustration Fig.1(b) below, the attitude of *the pair of cut panels including the two cut panels PR and PL adjacent to each other* is rotated to the attitude that is obtained by 90 degrees rotation with respect to the flow direction.

And as shown in the illustration Fig.1 (b)-(d) below, (excess portions 15 may be trimmed as necessary) the two cut panels PR and PL are spaced apart from each other in the width direction CD, each attached to both sides of the sheet-like material 20 that is to be a diaper main body.

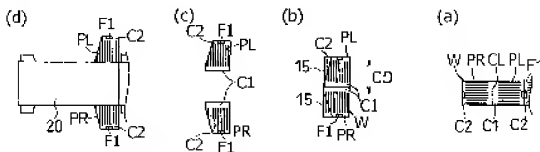
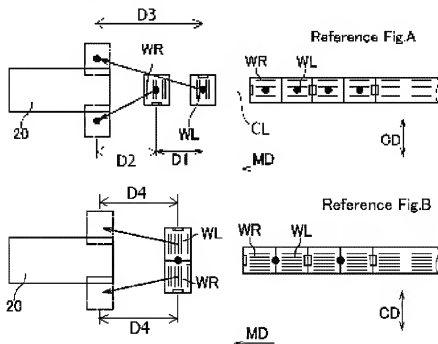


Fig. 1  
Present Application

In Durrance et al., the right and left strips 118 are rotated *individually* to be laminated to the bodyside liner material 104. This structure of Durrance et al. differs significantly from that of the amended claim 1.

The claimed method of the present invention produces several advantages over conventional methods. To illustrate, the following reference FIG.A shows that each cut panel is rotated individually and attached alternately to the right and left side of the main body 20. The following reference FIG.B shows that the two cut panels are rotated as in a pair and each cut panel is attached to the right and left side of the main body 20 as described in the present invention.



Based on the above figures, the number of necessary rotating mechanism in the ref. FIG.A will be twice as many as the rotating mechanism in the ref. FIG.B because the cut panels WR and WL in the ref. FIG.A are rotated *individually*. In the ref. FIG.A, when the cut panels WR and WL are pre-attached to the main body 20, they are spaced apart from each other in the distance D1 in the flow direction MD. However, once they are attached to the main body 20, they are in the same position seen from the flow direction MD. That is, as shown in the ref. FIG.A, the distance D3 in which the cut panel WL is transferred and then attached to the main body 20 is longer than the distance D2 in which the cut panel WR is transferred and then attached to the main body 20.

Therefore, a mechanism in which the cut panels WR and WL are attached to the main body 20 after being rotated would be significantly complex because of the different distances.

In contrast, in the ref. FIG.B showing the present invention, the two cut panels WR and WL are transferred *in the same distances D4*, so a mechanism in which the cut panels WR, WL are attached to the main body 20 after being rotated would be simple.

(3) In the ref. FIG.A, it is necessary for the cut panels WR and WL on the same axis CL to be directed to the right and left side of the main body 20 alternately. Therefore a mechanism for doing so would be complex.

In contrast, the ref. FIG.B showing the present invention, the post-rotated and pre-attached cut panels WR and WL are adjacent in the width direction CD as in a pair. Therefore it would be easy for the cut panels WR and WL to be directed to the right and left side of the main body.

Applicants respectfully submit that even if one skilled in the art were to combine the teachings of Durrance et al. with the teachings of Morman, Schneider et al., Nakakado et al., Nease et al. and Guevara et al., the resulting combination would not include all of the recited features of claims 1, 4 and 7. Therefore, prima facie obviousness cannot be established and the rejection under 35 U.S.C. §103(a) should be withdrawn.

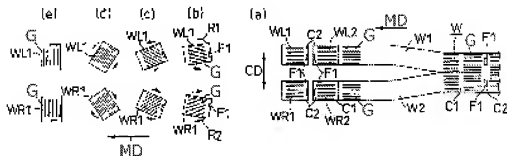
## **II. REJECTION OF CLAIMS 2 AND 14 UNDER 35 U.S.C. § 103(a)**

Claims 2 and 14 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over McNichols (U.S. Patent No. 6,667,085) as evidenced by Morman (U.S. Patent No. 5,226,992) in view of Schneider et al. (U.S. Publication No. 2004/0238105) and Nease et al. (U.S. Patent No. 5,705,013). The Examiner acknowledges that McNichols fails to disclose the elastic in the side panel material made of elastic threads, but contends that it would have been obvious to modify the method of McNichols to include elastic threads in the laminate based on the teaching of Schneider et al. It is the Examiner's position that although McNichols fails to disclose cutting the web in a flow direction to form two laminate webs, it would have been obvious to incorporate the teachings of Nease et al. into the method of McNichols

because one of ordinary skill would have recognized the economic advantage of utilizing a zero-scrap method of producing side panels as taught by Nease et al.

Applicants respectfully traverse the rejection for at least the following reasons. Claim 2 has been amended to clarify that the elastic thread in the attitude-changed cut panel extends in a direction perpendicular to a *flow direction of the attitude-changed cut panels*. Support for this amendment may be found in the specification at least in paragraph [0051] and in Fig. 4.

The following reference Fig.2 is a figure wherein the character "G" indicating the elastic thread has been added to Fig.4 (a)-(e) of the present application. As shown in the reference Fig.2 (a), the elastic thread G is fed on the sheet-like material along the flow direction MD. After that, as shown in the reference Fig. 2 (b)-(e), the cut panels WL1 and WR1 are rotated towards the rotational direction R1 and R2 to the attitude that is obtained by 90 degrees rotation with respect to the flow direction MD. As shown in the reference Fig. 2(e), the elastic thread G in the 90 degrees-rotated cut panels WL1 and WR1 extends along a direction perpendicular to the flow direction MD of the *attitude-changed cut panels*.

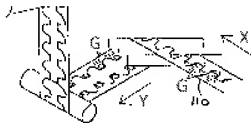


Reference Fig.2  
(corresponding to Fig.4(a)-(e) of the application)

Since the extension direction of the elastic thread G is rotated 90 degrees with respect to the flow direction, when the elastic thread G is fed on the sheet-like material the elastic thread G can be fed on the sheet-like material *along the flow direction MD* as shown in the reference Fig. 2(a), therefore making the forming of the laminate W easier.

The following Fig.3 is an assumed figure, in which Fig.1 of McNichols is partially extracted, that an elastic thread G would be fed on the side panel 110. As shown in the

reference Fig.3, the elastic thread G would be fed on the side panel 110 along a *direction perpendicular to the flow direction X*. However such feeding method is very difficult to be achieved from the technical standpoint. Moreover, the elastic thread G would be fed on the side panel 110 along a direction perpendicular to the flow direction of pre-attitudinal change of the side panel 110, and even after the side panel 110 changes its attitude the elastic thread G extends along a direction perpendicular to the flow direction Y of the post-attitudinal change of the side panel 110.



Reference Fig.3  
McNichols

That is, in McNichols, if the elastic thread was fed on the side panel, *the extension direction of the elastic thread G would be unchanged with respect to the flow direction*.

Applicants respectfully submit that even if there were some motivation to combine the teachings of McNichols with those of Schneider et al. and Nease et al., the resulting combination would not include all of the features of the method of claim 2. Accordingly, prima facie obviousness cannot be established and the rejection of claim 2 under 35 U.S.C. §103 should be withdrawn.

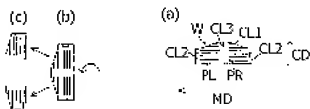
### **III. REJECTION OF CLAIMS 3, 8-10 AND 15 UNDER 35 U.S.C. § 103(a)**

Claims 3, 8-10 and 15 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Olson et al. (U.S. Patent No. 6,645,190) in view of Schneider et al. (U.S. Publication No. 2004/0238105), Nease et al. (U.S. Patent No. 5,705,013) and Pohjola (U.S. Patent No. 5,224,405). The Examiner acknowledges that McNichols fails to disclose the elastic in the side panel material made of elastic threads, but contends that it would have been obvious to modify the method of McNichols to include elastic

threads in the laminate based on the teaching of Schneider et al. It is the Examiner's position that it would have been obvious to incorporate the teachings of Nease et al. into the method of Olson et al. because one of ordinary skill would have recognized the economic advantages of utilizing a zero scrap method of producing side panels as taught by Nease et al. It is also the Examiner's position that it would have been obvious to incorporate a known successful method of rotating and placing a discrete side article onto web of material, such as the method of Pohjola, into the method of Olson et al. because such a modification would have been well within his technical grasp.

Applicants respectfully traverse the rejection for at least the following reasons. Claims 3 and 8 have been amended. Support for amendment to claim 3 may be found in the specification at least in the paragraphs [0063] and [0064], and in Fig.11.

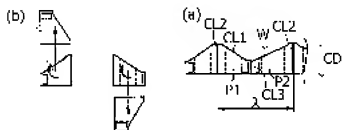
As shown in the following reference Fig.4, the divided laminate W is cut along the cut-off line CL2 extending in the width direction CD in the troughs of the wave-shaped cut-off line CL1 and *also cut along the cut-off line CL3* extending in the width direction CD in the peak of the wave-shaped cut-off line CL1 to obtain a pair of first cut panels PL and PR adjacent to each other. After that, as shown in the reference Fig.4 (b)-(c) and the Fig.11 (c)-(n) of the present application, the attitude of the pair of first cut panels is rotated to the attitude that is obtained by a 90 degrees rotation with respect to the flow direction. And the attitude-changed pair of cut panels is each attached, in being spaced apart from each other in the width direction CD, to the right and left sides of the sheet-like material that is to be a diaper main body.



Reference Fig.4

Since the laminate is cut along the wave-shaped cut-off line CL1, trapezoidal-shaped panels can be obtained without trimming panels as shown in Fig.2 (f) and (g) of the present application.

Support for amendment in the claim 8 may be found in the specification at least in paragraphs [0063] and [0092], and Fig. 21. As shown in the following reference Fig.5, the divided laminate W is cut, at a predetermined interval of the flow direction, along the cut-off line CL2 extending in the width direction CD in the peaks of the wave-shaped cut-off line CL1 and also along the cut-off line CL3 extending in the width direction CD in the trough of the wave-shaped cut-off line CL1 to produce, for every iteration of the wavelength  $\lambda$ , the first and second cut panels P1 and P2 being generally in line symmetry with each other. After that, as shown in Fig.21 of the present application, the attitude of the cut panels is rotated to the attitude that is obtained by a 90 degrees rotation. The attitude-changed cut panels is each attached, in being spaced apart from each other, to the right and left sides of the sheet-like material that is to be a diaper main body.



Reference Fig.5

As in amended claim 3, trapezoidal-shaped panels can be obtained without an additional panel trimming operation. Claim 3 and claim 8 have both been amended to clarify the sequence of steps in the claimed process. Even if one skilled in the art were to combine the teachings of Olson et al. with those of Schneider et al., Nease et al. and Pohjola, the resulting method would not include all of the features of the methods of claims 3 and 8. Accordingly, prima facie obviousness cannot be established, and the rejection of claims 3, 8-10 and 15 under 35 U.S.C. §103 should be withdrawn.

#### **IV. REJECTION OF CLAIM 16 UNDER 35 U.S.C. § 103(a)**

Claim 16 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over McNichols (U.S. Patent No. 6,667,085) as evidenced by Morman (U.S. Patent No. 5,226,992), Schneider et al. (U.S. Publication No. 2004/0238105) and Nease et al. (U.S.



Patent No. 5,705,013) and further in view of Roessler et al. (U.S. Patent No. 5,399,219). It is the Examiner's position that it would have been obvious to incorporate a known method of forming side panel webs with fasteners, such as the method of Roessler, into the method of McNichols because such a modification would have been within his technical grasp.

Applicants respectfully traverse the rejection for at least the following reasons. Claim 16 depends from claim 2. As discussed above, claim 2 has been amended to clarify that the elastic thread in the attitude-changed cut panel extends in a direction perpendicular to *a flow direction of the attitude-changed cut panels*. In McNichols, if the elastic thread was fed on the side panel, the extension direction of the elastic thread G would be unchanged with respect to the flow direction. Thus, McNichols fails to disclose or suggest the elastic thread in the attitude-changed cut panel extends in a direction perpendicular to a flow direction of the attitude-changed cut panels. None of Schneider et al., Nease et al. or Roessler et al. teach or suggest these claimed features. Applicants respectfully submit that even if there were some motivation to combine the teachings of McNichols with those of Schneider et al., Nease et al. and Roessler et al., the resulting combination would not include all of the recited features of the method of claim 16. Accordingly, prima facie obviousness cannot be established and the rejection of claim 16 under 35 U.S.C. §103 should be withdrawn.

**V. REJECTION OF CLAIM 17 UNDER 35 U.S.C. § 103(a)**

Claim 17 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Olson et al. (U.S. Patent No. 6,645,190), Schneider et al. (U.S. Publication No. 2004/0238105), Nease et al. (U.S. Patent No. 5,705,013) and Pohjola (U.S. Patent No. 5,224,405) and further in view of Surprise et al. (U.S. Patent No. 6,174,303). The Examiner contends that it would have been obvious to incorporate the teachings of Surprise et al. into the method of the combined references Olson et al., Schneider et al., Nease et al. and Pohjola and use a dual fastening system for the diaper because Surprise et al. teaches that a dual fastening system provides improved diaper fit as well as additional support for the absorbed chassis.

Applicants respectfully traverse the rejection for at least the following reasons. Claim 17 depends from claim 3. As discussed above with reference to claim 3, the combination of the teachings of Olson et al., Schneider et al., Nease et al. and Pohjola fail to teach or suggest all of the recited features of the method of claim 3. Surprise et al. fails to cure the deficiencies of the combination of Olson et al., Schneider et al., Nease et al. and Pohjola et al. Thus, even if one skilled in the art were to combine the teachings of Olson et al. with those of Schneider et al., Nease et al., Pohjola and Surprise, the resulting method would not include all of the features of the method of claim 17. Accordingly, prima facie obviousness cannot be established, and the rejection of claim 17 under 35 U.S.C. §103 should be withdrawn.

**VI. REJECTION OF CLAIMS 18 AND 20 UNDER 35 U.S.C. § 103(a)**

Claims 18 and 20 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over McNichols (U.S. Patent No. 6,667,085) as evidenced by Mormon (U.S. Patent No. 5,226,992), in view of Schneider et al. (U.S. Publication No. 2004/0238105), Nease et al. (U.S. Patent No. 5,705,013) and further in view of Nakakado et al. (U.S. Patent No. 6,748,996). It is the Examiner's position that it would have been obvious to incorporate the elastic web forming method of Nakakado et al. into the method of the combined references McNichols, Mormon, Schneider et al. and Nease et al. because one of ordinary skill would recognize the economic benefits of applying the elastic intermittently as in the method of Nakakado et al.

Applicants respectfully traverse the rejection for at least the following reasons. Claims 18 and 20 depend from claim 2. As discussed above, claim 2 has been amended to clarify that the elastic thread in the attitude-changed cut panel extends in a direction perpendicular to *a flow direction of the attitude-changed cut panels*. Claim 2 has been further amended to recite the sequence of the steps of the claimed method. As demonstrated above, McNichols fails to disclose or suggest the elastic thread in the attitude-changed cut panel extends in a direction perpendicular to a flow direction of the attitude-changed cut panels. The combined teachings of McNichols, Schneider et al. and Nease et al. fail to teach all of the recited features of the method of claim 2. Nakakado et al. fails to cure the deficiencies of the combination of McNichols,

Schneider et al. and Nease et al. Thus, even if there were some motivation to combine the teachings of Nakakado with those of McNichols, Schneider et al. and Nease et al., the resulting combination would not include all of the features of the method of claims 18 and 20. Accordingly, prima facie obviousness cannot be established and the rejection of claims 18 and 20 under 35 U.S.C. §103 should be withdrawn.

**VII. REJECTION OF CLAIMS 19 AND 21 UNDER 35 U.S.C. § 103(a)**

Claims 19 and 21 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Olson et al. (U.S. Patent No. 6,645,190) in view of Schneider et al. (U.S. Publication No. 2004/0238105), Nease et al. (U.S. Patent No. 5,705,013) and Pohjola (U.S. Patent No. 5,224,405) and further in view of Nakakado et al. (U.S. Patent No. 6,748,996). The Examiner contends that it would have been obvious to incorporate the web forming method of Nakakado et al. into the method of the combined references Olson et al., Schneider et al., Nease et al. and Pohjola because one of ordinary skill would recognize the economic benefits of applying the elastic intermittently as in the method of Nakakado et al.

Applicants respectfully traverse the rejection for at least the following reasons. Claim 3, from which claims 19 and 21 depend, has been amended. As discussed above with regard to claim 3, the combination of the teachings of Olson et al., Schneider et al., Nease et al. and Pohjola fail to teach or suggest all of the recited features of the method of claim 3. Nakakado et al. does not cure the deficiencies of the combined references. Thus, even if one skilled in the art were to combine the teachings of Nakakado et al. with those of Olson et al., Schneider et al., Nease et al. and Pohjola, the resulting combination would not include all of the recited features of claims 19 and 21. Because prima facie case of obviousness cannot be established, the rejection of claims 19 and 21 under 35 U.S.C. §103 should be withdrawn.

**VIII. NEW CLAIMS**

New claims 22 and 23 have been added. Claim 22 depends from claim 2, and claim 23 depends from new claim 22. Support of new claim 22 can be found in the specification at least in paragraphs [0050] and [0053], and in Fig. 2. Support for claim

23 can be found in the specification at least in paragraphs [0056], [0057] and [0061], and in Figs. 6 and 8.

**IX. CONCLUSION**

In view of the foregoing amendments and remarks, claims 1-4, 7-10 and 15-23 are believed to be allowable and the application is believed to be in condition for allowance. A prompt action to such end is earnestly solicited.

Should the Examiner feel that a telephone interview would be helpful to facilitate favorable prosecution of the above-identified application, the Examiner is invited to contact the undersigned at the telephone number provided below.

Should a petition for an extension of time be necessary for the timely reply to the outstanding Office Action (or if such a petition has been made and an additional extension is necessary), petition is hereby made and the Commissioner is authorized to charge any fees (including additional claim fees) to Deposit Account No. 18-0988.

Respectfully submitted,

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